

IN THE SPECIFICATION:

Please replace the paragraph beginning on line 3, page 8 with the following paragraph:

A

Figs. 5 and 6 are enlarged views showing details of the construction of conduits 50 and the top plates 72. The views particularly show the preferred construction of the screen which forms the surface of the conduit inner wall surface 52. A plurality of vertical screen wires 82 are welded to a plurality of support rods 84 at a spacing which forms flow slots or openings 86 which have a lesser width W_s W_d than the size of the particulate matter forming the bed 70. Angular corner members 88 retain the inner wall surface or screen member 52 by being welded to the side walls 54, 56 and tack welded to the screen members 52. Although the inner wall surface 52 is shown as being slightly concave so as to cause the radial thickness of the particulate bed 70 to be substantially constant, a flat surface would provide a very close approximation and would also produce a substantially constant radial bed thickness. The inner wall surface 52 is shown as being equidistant from the outer wall surface 58 along its vertical length, but it could also be tapered.

Please replace the paragraphs beginning on line 23, page 9 to line 2, page 11 with the following paragraphs:

A2

Fig. 9 shows a modified design in which alternating conduits 250, 260 have generally trapezoidal and generally rectangular shaped cross-sections, respectively. The combination of shapes maximizes the total inside cross-sectional flow area of the ring of conduits, causing it to be slightly greater than that provided by the embodiment of Fig. 7 and substantially greater than that provided by the prior art scallop shaped conduits illustrated in Fig. 2. This combination of complementary shapes also eliminates the small void space 69 between conduits which is present in the embodiment of Fig. 7 and thereby eliminates the chance that particulate material can be wasted in a location where it will serve no purpose. The side walls 254, 256, outer wall 258 and inner wall portion 252 of the trapezoidal shaped conduits 250 correspond to similarly numbered elements 50-58 in Fig. 7. The generally rectangular shaped

A2
conduits 260 have inner wall portion 262 and side wall portions 264, 266 which are parallel to each other and are also parallel to the angled side wall portions 254, 256 of adjacent trapezoidal shaped conduits 250. As noted in the description of Fig. 7, a small gap W_g is preferably provided between the adjacent conduits 250, ~~256~~ 260 to provide a tolerance for manufacturing and also allow for any thermal expansion that might take place during use. If desired, each of the rectangular shaped conduits 260 can have a sealing plate 271 welded to its corner portion 278 to ensure that particulate material cannot enter the gaps W_g . The sealing plates 271 are attached only to the rectangular shaped conduits, and have a width sufficient to cover the corner portions 288 of the trapezoidal shaped conduits 250. They are preferably of less thickness than the wall portions 264, 266 and 268 so that the radial outward pressure applied to their surfaces by the annular bed of particulate material 70 will produce a tight seal against the corner portions 288.

A3
The trapezoidal shape of conduits 50 in the embodiment shown in Fig. 7 and the combination of trapezoidal and rectangular shaped conduits 250 and ~~256~~ 260 in the embodiment shown in Fig. 9 provide an improvement in cost and ease of replacement as compared to the prior art construction shown in Fig. 1 while closely approximating the uniformity of flow distribution which is possible with a cylindrical outer screen basket member. The disclosed conduit shapes also offer the ease of installation and replacement possible with the convex scallops arrangement of Fig. 2 while achieving a highly uniform flow distribution through the particulate bed 70 which is not possible with the convex scallops arrangement. In addition, for conduits 50, 250 or 260 having the same width W_o as the scallops members 22 of Fig. 2, the interior cross-sectional area can be much larger for the same radial depth. This larger area results in a lower velocity vertical flow rate, less turbulence, and far more uniform flow through the entire inner screen surface 52. This is especially true for the embodiment shown in Fig. 9. Alternatively, the radial thickness of the conduits 50, 250 or 260 could be reduced to a distance which is considerably less than the depth of the scallops 22 while still having an equal or greater internal cross-sectional area. In the latter situation, for a given radial thickness of the particulate bed 70, the vessel 42 could have a smaller outer diameter and thus be manufactured for a lower cost.